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LITHOGRAPHIC ABSTRACTS, MARCH 1960

PHOTOGRAPHY, TONE & COLOR CORRECTION

HIGH INTENSITY, HIGH SPEED MULTIFLASH APPARATUS. G. Dixon-Lewis and E. G. Jackson. Journal of Scientific Instruments, Vol. 36, No. 10, Oct. 1959, pp. 417-8, 2 pages. Authors' Abstract. An apparatus has been constructed to provide a number of high-intensity xenon flash discharges at time intervals from 0.1 to 2.5 x 10^{-4} s between flashes, each flash dissipating 300 Ws in approximately 180 ms. Two flash-head arrangements were used: in one, tubes were mounted on a rotating disc thus giving a series of flashes from one fixed position, whilst the other consisted of a stationary bank of tubes, the location of the individual tubes determining the position of each flash. 3 illustrations. 4 references.

THE GENESIS OF THE FAIRCHILD SCAN-A-COLOR. Robert Brunhouse. British Printer, Vol. 72, No. 10, Oct. 1959, pp. 67-9, 3 pages. Some background history is given on events leading to the presence of the Fairchild Corp. in the graphic arts field and the introduction of the Scan-A-Graver in 1947 and other equipment since. The newest is the Scan-A-Color which produces same-size continuous tone colour-corrected separations on negative or positive dimensionally stable film from transparencies or opaque copy, with accurate control of under colour treatments. Controls can be adjusted to improve weak copy, to compensate for ink characteristics, and to accentuate highlight or shadow detail. A scanning choice of 340, 500, or 1000 lines per inch is offered; at 500 lines a full size 8 x 10 in. set is claimed to be completed in 50 minutes. Two illustrations, a general view of the prototype model, and a schematic diagram.

NOT BY SILVER ALONE. Martin Hepher. Perspective, Vol. 1, No. 1, 1st Quarter, 1959, pp. 28-37, 10 pages. A review of the present status of photographic or related processes not dependent upon silver salts. These are grouped in several classes and the graphic arts relationships were pointed out in the case of such processes as those where light affects solubility and those where light affects electrical conductivity. One illustration and 17 references.

SECOND THOUGHTS ON COLOUR VISION. Anon. Perspective, Vol. 1, No. 3, 3rd Quarter, 1959, pp. 284-8, 5 pages. A discussion of recent work in which Dr. Land of Polaroid has demonstrated that two colour projection gives a full range of color sensations. Some history of two color processes is given. Three charts and two references.

A FEW CAMERA TRICKS. John Pince. National Lithographer, Vol, 66, No. 11, Nov. 1959, pp. 34-5, 2 pages. Tricks presented are: A method of producing a line screen effect with a normal cross line screen by using a slit diaphragm; halftones using fine mesh window screen material; duotones; textured tint blocks. 2 illustrations.

SOME TIPS ON CAMERA BACK MASKING. Edward Glauder. Research Progress No. 45, Photographic Department Memo. No. 1, Nov. 1959, 4 pages, Lithographic Technical Foundation. The method is described briefly and some characteristics, precautions and advantages given. Then follows a step-by-step procedure in some detail covering such items as register in the camera back, testing filters and lenses to assure registration of masks, the use of color patches as a check on the densities of the masks, also the use of the gray scale. Screening is discussed. Three tables give data on filters, exposures, and densities; a graph shows characteristic curves of the masks; and an illustration shows ideal color patch relationships.

REPORT FROM EUROPE. Robert MacKay. Gravure, Vol. 5, No. 10, Oct. 1959, pp. 34-6, 72, 74-5, 6 pages. A portion of the article is devoted to a visit to an installation of a Hell Colorgraph C202. Its operation, starting with three uncorrected color separation negatives to give 3 or 4 corrected negatives or positives is described with the aid of a simplified block diagram.

REPRODUCTION TO ACCURATE SIZE: 6 ENLARGING THE SCALE OF REFERENCE. CONCLUSION OF THE SERIES. Frank H. Smith. Modern Lithography, Vol. 27, No. 11, Nov. 1959, pp. 65-6, 132, 3 pages. Author first points out that greater precision and resolution is obtained with short focal length lenses than with long. The method described in this installment is one that was used in preparing accurate reticules for optical instruments and uses an enlarger type of equipment. For large scale reductions a two step procedure is described, using a vernier scale type of checking procedure. The mathematics involved is gone into in some detail. 1 illustration.

SURVEY OF COLOR SCANNERS: WHAT'S HERE; WHAT'S TO COME. J.A.V. HYATT. Modern Lithography, Vol. 27, No. 11, Nov. 1959, pp. 52-4, 3 pages. From a talk presented at the 63rd annual convention, American Photoengravers Association, Dallas, Oct. 19, 1959. "It is estimated that well over $6 million has been spent in research on color scanners by some 10 organizations." Three organizations expect to start making delivery of four different machines in early 1960. These are the Crosfield Scanatron; Hell of Germany with the Colorgraph, and the color version of the Vario-Klischograph; and Fairchild with the Scan-A-Color. These four machines, plus four others are each discussed at some length. These others are the Time-Life Scanner which has been in use for some time and is constantly being improved; the H.P.K. Autoscan which is in use in nine firms; the Belinograver from France which apparently is still under development; and the Miehle Color Scanner which is still in the developmental stage with no estimate of completion time. 1 illustration.

HOW TO SPREAD LETTERS. Charles C. Ball. Graphic Arts Monthly, Vol. 31, No. 11, Nov. 1959, pp. 86, 88, 90, 3 pages. The problem involved is that of spreading or thickening the face of letters or hand-lettering to get adequate overlap when fitting the letters into a reverse in two color work. Several methods are mentioned, but the usual practice appears to be to guess at the extent of the spreading. The author gives a method, involving a guide chart which makes possible closer control over the amount of spreading to be obtained. 4 illustrations.

A DETAILED CHECKLIST ON HOW TO MAKE GOOD HALFTONE TINTS. Dick Arden. Graphic Arts Monthly, Vol. 31, No. 11, Nov. 1959, pp. 66, 68, 70, 72, 74, 5 pages. Author suggests that instead of only using good parts of tint sheets, methods are available to avoid the waste of the rest, as good tints can be made. The methods given are for use with contact screens, gray or magenta. Author gives detailed instructions with detailed commentaries under the following 13 headings. 1. The screen. 2. Humidity. 3. The film. 4. Developer. 5. Manipulation in development. 6. Light sources. 7. Static electricity. 8. Newton rings. 9. Vacuum frame. 10. Open faced or camera vacuum back. 11. Halation. 12. Smoothness of underlying surfaces. 13. Washing and drying.

*HOW TO PREPARE COPY FOR THE PRINTER. Anon. Advertising Requirements, Vol. 7, No. 11, Nov. 1959, pp. 119-20, 122, 3 pages. Some basic rules are given which should save money. Mostly the author attempts to show what the copy should be like in relation to the uses to which it will be put.

*PRESCREENED FILM. K. R. Yanson. Poligraf. Proizvodstro, No. 1, 1958, pp. 18-20. From Monthly Abstract Bulletin, Vol. 45, No. 11, Nov. 1959, p. 478. The nature and mode of use of prescreened graphic-arts materials are explained. Work

on these is proceeding at the (Soviet) All-Union Research Institute for the Printing Industry. Mention is made of Kodalith Autoscreen Film, already in production. Processes based on the Albert effect and on the Clayden effect have been tried, and preference appears to be given to the Clayden effect as the simpler to manipulate.

*4 NEW ELECTRONIC COLOR SCANNERS READY FOR 1960. Anon. Editor & Publisher, Vol. 92, No. 46, Nov. 14, 1959, p. 66. The four are: a. The Crosfield Scanatron (British). b. The Hell Colorgraph (German). c. The Hell Vario-Klischograph (German). d. The Fairchild Scan-A-Color (U.S.A.). The present status and operating features of each are described.

A SIMPLE IMAGE REVERSER. J. T. Groet. Bulletin for the Graphic Arts, No. 12. (Eastman Kodak Co.), Undated, but received Dec. 7, 1959, pp. 10-1, 2 pages. Brief instructions are given for a simple device consisting of a framework to be mounted on the back of a process camera and having a front surface mirror mounted at 45° to reflect the image upward onto the sensitive material. 2 illustrations.

THE QUALITY OF WATER FOR PHOTOGRAPHIC PROCESSING. Lloyd E. West. Photographic Science and Engineering, Vol. 3, No. 6, Nov.-Dec. 1959, pp. 283-7, 5 pages. Author's Abstract. There are no standards for the purity of water required for processing photographic materials. This paper describes the photographic effects of impurities sometimes found in water. The effects of water hardness, suspended matter, chlorine, chloride, algae, slimes, pH, copper, iron, manganese, lead, fluoride, zinc, tin, total salt content, and sulfide are described. 2 tables, 3 graphs, 3 references.

BOILED FILM. Anon. Industrial Research, Vol. 1, No. 4, Nov.-Dec. 1959, pp. 94-5, 2 pages. Slide-O-Film from Charles Beseler Co., East Orange, N. J. is a slow speed, ultraviolet sensitive film suitable for halftone or line copy work, making positive projection slides, etc. Development is by heating to 212 to 250°F in boiling water or by other means. Some uses are suggested. A development from the older Kalfax film of Kalvar; the image is grainless and permanent. 1 illustration.

PLANOGRAPHIC PRINTING PROCESSES

*PALLADIUM PLATING BY CHEMICAL REDUCTION. U. S. Patent 2,915,406 - Application March 3, 1958. Richard N. Rhoda and Ann-Mari Madison, Assigned to the International Nickel Company. Official Gazette 749, No. 1, December 1, 1959, p. 181. A bath for depositing palladium comprising a single-phase, water-containing liquid having in solution about 0.001 to about 0.25 mole per liter or divalent palladium, about 0.002 up to about 0.05 mole per liter of hydrazine, about 0.005 up to about 0.25 mole per liter of a stabilizing agent selected from the group consisting of aliphatic ketones containing from 3 to about 5 carbon atoms per molecule, ammonium salts of mono and di-basic mineral acids, the disodium salt of ethylenediaminetetraacetic acid and 2,2'-thiodiethanol, about 2.5 up to about 14 moles per liter of at least one substance selected from the group consisting of ammonia and aliphatic organic compounds containing a primary amine group and having up to 5 carbon atoms per molecule and the balance essentially water, said water being in a concentration of at least 2 moles per liter.

*PROCESS OF COATING METAL AND RESULTING ARTICLES. U. S. Patent 2,911,332 - Application May 25, 1956. Ludwig K. Schuster and Alfonso L. Baldi, Jr. - Assigned to Kelsey-Hayes Co. Official Gazette 748, No. 1, November 3, 1959, p. 185. A method for treating a non-ferrous metal surface comprising the steps of coating the surface with an aqueous solution consisting essentially of water, chromic acid and a compatible reducing agent for the chromic acid, said reducing agent being compatible with the chromic acid for at least one day at 80°F., and heating the

coated surface to a temperature of from 250 to 500 degrees F. to cause the reducing agent to react with the chromic acid and leave a water-insoluble layer, the proportions of reducing agent and chromic acid being such that from about 40 to 95% of the chromium in the chromic acid is reduced to trivalent form, and the final layer weighs at least about 3 milligrams per square foot of surface.

PRE-SENSITIZED PLATES. By a Technical Correspondent. The Litho-Printer V. 1, No. 1, January 1958, pp. 8, 10 (2 pages). The advantages and disadvantages of presensitized plates are discussed. A comparison of these plates vs. the usual dichromated colloid surface plate is made. The platemaking operations are considered as is the performance on the press. The advantages and disadvantages of the grainlessness of these plates are shown. A survey of the plates available is included.

*CORROSION INHIBITION. U. S. Patent 2,918,390 - Application March 8, 1957. Lewis J. Brown and Samuel Spring - Assigned to Pennsalt Chemicals Corp. Official Gazette 749, No. 4, December 22, 1959, p. 1020. The method of preventing white rust on galvanized stock comprising cathodically cleaning the stock in an alkali, rinsing off the entrained alkali, applying a 0.01 to 1% solution of a fatty amine salt thereby depositing a hydrophobic fatty amine salt layer on the bare metal, and then applying a 0.05 to 0.5% solution of a hexavalent chromium compound directly to said fatty amine salt layer, said salt having the formula $R\text{-}NH_3X$ wherein R is an alkyl group having at least 8 carbon atoms and X is an anion of the group consisting of acetate, lactate and chloride.

DEEP-ETCH ZINC PLATES (Conclusion). William Byers. Graphic Arts Monthly 31, No. 12, December 1959, pp. 110, 112, 114, 116 (4 pages). An advantage of deep-etch plates over negative and surface plates is the ability to manipulate to sharpen all or portions of a plate. Staging, development, lacquering, etc. are carried along step-by-step and explained up to the point where the plate is ready for the press.

RULING LINES ON FILM. Charles C. Ball. Graphic Arts Monthly, Vol. 31, No. 10, Oct. 1959, pp. 76, 78, 80, 3 pages. A number of specific tips are given for getting the best results in this operation. Troubles with dull tools and tough emulsions are discussed. One method given is tracing on unexposed film, followed by development and fixation. 2 illustrations.

*TRIMETALLIC PLATES AND THEIR EXTENSIBILITY IN PRACTICE. Anon. Roland Nachrichten, No. 12, May 1959, pp. 10-2 (in German); Printing Abstracts 14, No. 9, September 1959, Abst. #3341, p. 745. The extensibility of these plates depends on the type of base plate used. Plates are stretched to compensate for the stretching of the paper during the printing process. Distorted films and montages may also necessitate stretching of the plates. The operation of plate stretching machines is indicated.

CARE IN HANDLING ZINC PLATES ON THE PRESS. William Byers. Graphic Arts Monthly 32, No. 1, January 1960, pp. 124, 126, 128, 130, 132 (5 pages). Specific tips and suggestions are given on what a good zinc plate should have, and how to get the most out of it on the press.

*REVIEW OF THE DEVELOPMENT AND ADVANTAGES OF THE BIO PLATE. Anon. Fachhefte fur die Chemigraphie, Lithographie und den Tiefdruck No. 2, May 1959, pp. 113-6 (in German); Printing Abstracts 14, No. 9, Sept. 1959, Abst. #3240, p. 745. The characteristics of the German-made BIO copper and chromium-coated plate on a black-plate base are discussed (cf. Print. Abstr. 3490/58.). The reduced water requirements increase the sharpness of the image, and good register can be obtained by the decreased tendency of the paper to stretch during the printing process.

PAPER AND INK

*NEW DEVELOPMENTS IN PRINTING INKS. G. W. Whitfield. Brit. Fed. Mast. Print. Memb. Circ., Vol. 58, No. 4, Apr. 1959, p. 156. From Printing Abstracts, Vol. 14, No. 7, July 1959, Abstr. 2375. In this paper given before the British Federation of Master Printers Technical Committee reference was made to improvements in the fastness of pigments, the British Standard 3020: 1959 on improved inks for Letterpress Four-Colour Printing, the Society of British Ink Manufacturers pamphlet on Printing Inks for Food Wrappers and Packages, improvements in testing methods, ink performance and operational research.

*IMPROVED INKS FOR LITHOGRAPHIC BOOK PRODUCTION. F. W. Stoyle. Bk. Design & Prod., Vol. 2, No. 1, 1959, pp. 46-7. From Printing Abstracts, Vol. 14, No. 7, July 1959, Abstr. 2373. Advances in the manufacturing techniques and formulations of lithographic inks are briefly discussed.

CHANGES IN AIR HUMIDITY AND THEIR INFLUENCE ON PAPER AND INK IN THE LITHOGRAPHIC PROCESS. R. Müller. Der Polygraph, 15-1959, 5 Aug. 1959, pp. 673-4, 2 pages (in German).

PAPER FOR WEB OFFSET PRINTING. K. L. Wallace. American Pressman, Vol. 69, No. 8, Aug. 1959, pp. 25-7, 3 pages. Much has been learned by trial and error about paper for web offset, more remains to be learned. Papers used include coated and uncoated, groundwood and free sheet, glossy and dull finish, and newsprint, with basis weight from 25 to 90 lb. book basis. Present consumption is approximately 340,000 tons per year, of which approximately 74,000 tons is coated. Some qualities required are listed as: 1. Sheet strength. 2. Water resistance in a coated sheet. 3. Paper must be free of surface dust, lint, hickies. 4. Condition of rolls more critical than for web letterpress. Use of letterpress papers on web offset is discussed. Blisters are a problem in heat-set printing, which the author considers at some length.

*PAPER AND THE PRINTER. F. T. Day. Print in Britain, Vol. 7, No. 2, June 1959, pp. 62-3, 2 pages. From Printing Abstracts, Vol. 14, No. 8, Aug. 1959, Abstr. 2703. The properties required for letterpress and litho papers are briefly given.

*POISON HAZARDS IN FOOD WRAPPERS. G. Dunbar. Print in Britain, Vol. 7, No. 2, June 1959, p. 51, 1 page. From Printing Abstracts, Vol. 14, No. 8, Aug. 1959, Abstr. 2671. Brief notes are given on the sources of the lead, copper, zinc and barium found in printing ink pigments and their effect on health.

SOLID BOARD, AN IDEAL PACKAGING MATERIAL. Anon. Der Polygraph, 20-1959, 20 Oct. 1959, pp. V30-V31, 2 pages (in German). 14 illustrations.

CYANOETHYLATION AS A MEANS OF IMPROVING THE DIMENSIONAL STABILITY OF PAPER. John L. Morton and Norbert M. Bikales. TAPPI, Vol. 42, No. 10, Oct. 1959, pp. 855-8, 4 pages. Authors' Abstract. An investigation of the properties of cyanoethylated paper was made with particular respect to dimensional stability. It was found that a substantial improvement in dimensional stability results when cyanoethylation is carried out on the pulp, rather than on the performed sheets. The improvement is proportional to the degree of cyanoethylation when substitution is carried out in the range where morphology of the pulp is unaffected. In blends of cyanoethylated and untreated pulps, the expansivity is directly related to the ratio of amounts of treated and untreated pulps in the blend. The improvement in dimensional stability is the result solely of etherification with acrylonitrile, as indicated by the fact that a control treated with alkali only showed no decrease in expansivity. A new process of cyanoethylation is described, involving the use

of minimal quantities of both sodium hydroxide solution and acrylonitrile. 6 graphs and 13 references.

THE FUNDAMENTALS OF CURL IN PAPER. P. Glynn, H. W. H. Jones, and W. Gallay. Pulp and Paper Magazine of Canada, Vol. 60, No. 10, Oct. 1959, pp. T-316 - T-323, 8 pages. Authors' Abstract. This contribution discusses the curl in paper, its similarities with and differentiation from other kinds of departure from the flat form, the measurement of curl and the types of curl based on the positioning of the fibres in the web. A modified technique of fibre orientation measurement is described, and data shown. In a series of machine-made papers, a linear relationship is shown between the extent of curl and the net contracting force calculated from fiber orientation data. Angular curl is sharply differentiated from normal or rectangular curl, and a theory is developed to explain the apparent anomalies and the general basis for angular curl. Some confirmatory evidence is presented for this theory.

The fundamental basis for curl is shown to lie in differential fibre orientation. Other causative factors must be regarded as superimposed on such considerations, and will be further discussed elsewhere. 12 figures and 5 references.

ADVANCES IN METAL DECORATING INKS. John W. Dyer. American Ink Maker, Vol. 37, No. 11, Nov. 1959, pp. 30-1, 33-4, 69, 5 pages. The functions of metal decorating are cited as: decorating, information, protection. Some history of the process is given, covering metals, presses and inks. Specific requirements of metal decorating inks are: 1. Resistance to lithographic breakdown. 2. Colors must not change in ovens nor bleed in finishing varnishes or lacquers. 3. Films must be flexible for subsequent stamping operations. 4. End use requirements must be met. 5. Must have abrasion resistance. Some recently introduced organic pigments which meet (2) are listed. Resins and varnishes which meet (3), (4), and (5) are listed and discussed. Lacquer and varnish coatings, some of which are pigmented, are discussed in relation to their requirements. Possible future trends include improved formulations, higher speeds, xerographic printing methods. Some growth statistics are quoted. 3 illustrations, 4 references.

LITHO REDS (IN COLOR FORUM). Aaron Permut. American Ink Maker, Vol. 37, No. 11, Nov. 1959, pp. 39, 67-8, 3 pages. Lithol reds are quoted as being a whole technology in themselves, long dominant in the industry, and growing in volume. Reasons for this position are given. Their chemistry and preparations are given briefly. A table gives bleed and resistance properties. No listing of makers is considered necessary as all make these pigments.

BOOK PAPERS. William H. Bureau. Graphic Arts Monthly, Vol. 31, No. 11, Nov. 1959, pp. 44, 46, 2 pages. Book papers comprise the largest part of the paper manufacturing industry. Some history is given on the interrelation between printing and paper making. The book paper family is the largest of all the paper families. It is briefly divided into various classes, such as coated and uncoated; groundwood; various surface finishes; slack and hard sized; letterpress, offset and gravure; etc.

EFFECT OF RELATIVE HUMIDITY ON PAPER AND HOW TO ESCAPE MANY PROBLEMS. O. E. Schroeder. Graphic Arts Monthly, Vol. 31, No. 11, Nov. 1959, pp. 8-11, 4 pages. Relative humidity control can be for: 1. Human comfort and efficiency. 2. For stability of paper, inks, etc. Paper troubles resulting from improper storage are explained and 10 forms of trouble are listed, troubles which can be corrected by proper temperature and humidity control to reduce production costs by 10 to 20%. Ideal conditions are described and suggestions given for controlling paper moisture in an unconditioned plant. 3 illustrations.

DIMENSIONAL STABILIZATION OF PAPER BY CATALYZED HEAT TREATMENT. W. E. Cohen, A. J. Stamm, and D. J. Fahey. TAPPI, Vol. 42, No. 11, Nov. 1959, pp. 904-8, 5 pages. Authors' Abstract. The dimensional stability of paper can be significantly increased by heat treatments with or without catalysts present. Various catalysts are shown to merely reduce the heating temperature or time to attain a definite degree of stabilization. Dry tensile and ring crush strengths are adversely affected by the treatment only when the dimensional stabilization exceeds 40 to 50% with all of the catalysts tried. The corresponding wet strengths are in all cases significantly increased up to 50 to 60% dimensional stabilization. Dry bursting and tearing strengths are adversely affected to varying degrees by all of the catalysts at all levels of stabilization. The same is true for folding endurance, except that dilute sodium hydroxide causes a significant increase in this strength property at high levels of dimensional stability. 6 graphs, 2 references.

*THE NINE DIMENSIONS OF PAPER. Thomas N. Cook. Advertising Requirements, Vol. 7, No. 11, Nov. 1959, pp. 42, 47-8, 3 pages. Definitions are given for nine commonly used paper terms necessary to fully describe a sheet of paper. They are: 1. Dimension and weight. 2. Grain direction. 3. Laid and wove. 4. Deckle edge and plain edge. 5. Color. 6. Finish. 7. Caliper. 8. Sizing. 9. Packaging. Finally: - - ". . . remember that the more the paper manufacturer knows about the end use of the paper, the more effectively he can fulfill your requirements."

LITHOGRAPHY - GENERAL

OFFSET LITHOGRAPHY INCLUDES MANY PRINTING METHODS. George M. Halpern. Inland and American Printer and Lithographer, Vol. 144, No. 1, Oct. 1959, pp. 80-1, 131, 3 pages. (Pressroom). A discussion of the various terms (lithography, photolithography, offset, photo-offset, offset lithography, planography) which are applied to a printing process and commonly used incorrectly. Some history is given in clarification of some of the terms, followed by some of the advantages of the process.

PRE-PRESS REGISTRATION ACHIEVED WITH ALLDIS PUNCH AND PINBOARD METHODS. Anon. Printing Magazine, Vol. 83, No. 11, Oct. 1959, pp. 103, 1 page. Description of a punch and pin register system developed by Harold Alldis of Palo Alto, Calif. Simple equipment and repeated infallibility are claimed.

HOW BLANKET SELECTION AFFECTS OFFSET PRINT QUALITY. Anon. Printing Monthly (Detroit), Vol. 11, No. 7, Oct. 1959, p. 8, 1 page. Report of tests run at the Rochester Institute of Technology for the Vulcan Rubber Products Div., Reeves Bros. Inc. Measurements were made on ink transfer and sharpness. Split blanket techniques as used in testing are described and it was found that blanket grade and quality did influence results.

DRYING PROCESS, SET-OFF AND ANTI-SET-OFF SPRAYING. Anon. Der Polygraph, 20-1959, 20 Oct. 1959, pp. 027-028, 2 pages (in German).

NEW COUPLING AIDS WEB TENSION CONTROL. Anon. Lithographer and Offset Printer, Vol. 55, No. 10, Oct. 1959, pp. 24, 26, 2 pages. Description of the use of a magnetic particle coupling in place of a manually controlled slipping friction plate clutch to control tension of paper during re-reeling after printing. Improved results were noted. 1 illustration and 1 table of recorded data.

*OFFSET DAILY BEGUN IN CITY NEAR HOUSTON. Anon. Editor and Publisher, Vol. 92, No. 41, Oct. 10, 1959, p. 16B, 1 page. A brief story on the Pasadena (Tex.) Citizen which is published 5 days a week (Mon., Wed., Thurs., Fri. afternoons, Sunday mornings). The second Texas daily paper by offset, it is printed on the

same Vanguard press as the other, the Arlington-Grand Prairie News Texas.

OFFSET COVER PRESSWORK. Anon. American Pressman, Vol. 69, No. 11, Nov. 1959, pp. 31-2, 2 pages. A report on part of a study of offset printing of pyroxylin impregnated fabrics for use on hard bound text books. The proper selection of inks, condition of the cloth and how it is cut, fountain solutions, offset blankets (7 specific points given) and other factors are considered.

FOUNTAIN DOPE: LITHOGRAPHIC PRESS DEVELOPMENTS. Jack E. Spencer. New England Printer and Lithographer, Vol. 22, No. 11, Nov. 1959, pp. 22, 24, 2 pages. Excerpts from a talk at the International Association of Printing House Craftsmen Convention in New York, Sept. 1959. Press developments have been gradual as demands grew. Among the developments touched upon briefly are: greater precision, larger sizes, more colors, improved blower control of sheets, continuous feeding of sheets from pile (two methods described), double deliveries, sheeter-feeder working from rolls, web offset.

NEW WRAP-AROUND PLATE AND PRESS SPELL TROUBLE FOR LITHOGRAPHERS? Charles W. Latham, Inland and American Printer and Lithographer, Vol. 144, No. 2, Nov. 1959, p. 53, 1 page. In answer to a question, the author explores the reasons why letterpress printers have been going into lithography, creating combination shops. He feels that the advent of the wrap-around plate and the press for it will be good for the industry in general and anticipates that some lithographic shops will spread into letterpress via the wrap-around plate because of its inherent advantages and the similarity to lithography.

OFFSET CYLINDER DIAMETERS AND BEARERS INTERRELATED. Noble B. Vining. Inland and American Printer and Lithographer, Vol. 144, No. 2, Nov. 1959, pp. 70-1, 117, 3 pages. Author points out that while manufacturers give definite instructions for packing their presses, they do not agree. The geometry of varying sheet thickness is gone into and it is pointed out that inaccurate packing results in an imperfect print and misregister. The effect of stretch, grain, curl and foreign particles are discussed in relation to packing. Printing with and without bearers, and packing accordingly are considered.

NAPL'S PAINTING COLOR SELECTOR FOR LITHOGRAPHIC PLANTS. Anon. Book. National Association of Photo-Lithographers, 317 W. 45th St., New York, 36. Free to members, $5 to non-members. Reviewed in Inland and American Printer and Lithographer, Vol. 144, No. 2, Nov. 1959, p. 93. This plastic ring-bound brochure offers selection suggestions based on a DuPont survey to determine which kind of paint and color will best meet the needs of various plant areas for protection, service and color benefit.

THE HOW AND WHY OF CARTON LITHOGRAPHY. CHAPTER 14. DEEP ETCH PLATES FOR CARTON LITHOGRAPHY. John Jachimiec. Boxboard Containers, Vol. 77, No. 803, Nov. 1959, pp. 42-5, 4 pages. Durability and top-flight tone reproduction are characteristic of deep etch plates. Author gives a step-by-step description of the preparation of a plate. 3 illustrations.

PROPER BLANKET CARE. Edward Kidby. National Lithographer, Vol. 66, No. 11, Nov. 1959, pp. 48, 112, 2 pages. Some specific suggestions on the breaking-in and subsequent care of an offset press blanket.

HOW MUCH FOR A DROP OF OIL? Roy M. Barnes. National Lithographer, Vol. 66, No. 11, Nov. 1959, pp. 41, 70, 2 pages. A brief story on a 4 color offset press running a job on a tight schedule which had developed misregister. Investigation revealed that a thorough clean-up job recently done on the press had robbed the

grippers of needed lubrication, causing sluggish gripper action and misregister. Oiling cured the trouble. 1 illustration.

HOW TO AVOID STRIPPING TROUBLES. Bernard R. Halpern. National Lithographer, Vol. 66, No. 11, Nov. 1959, pp. 38-40, 60, 4 pages. Reprinted from Offset Stripping, Black and White, published by Lithographic Technical Foundation. A summary of the sources of difficulties with negatives; positives; layouts; stripping; printing locations; shrinkage and stretch; and damage to negatives, positives, and flats. Suggestions are given as to how they can best be controlled for better quality lithography. Improvised corrections after the stripping job has been completed are touched upon.

GRAPHIC ARTS - GENERAL

CUT COSTS WITH GOOD PLANT DESIGN. Charles W. Latham. Inland and American Printer and Lithographer, Vol. 144, No. 1, Oct. 1959, pp. 65-7, 3 pages. Good plant design for efficiency in handling work can mean real savings in time, resulting in greater savings than many other forms of economy. The careful arrangement of production departments so that work follows an orderly, logical progression is discussed and illustrated with a simplified flow diagram for a combination plant.

EXPERIMENTS WITH NYLON PLATE. Anon. Printing Production, Vol. 90, No. 1, Oct. 1959, p. 45, 1 page. A brief story on the introduction at the Graphic Arts Exposition (New York, Sept. 1959) of a new nylon wrap-around letterpress printing plate. It can be used wrap-around or flat. Said to have been recognized by some as the German developed Fogra plate. Simplified processing, an automatic make-ready feature, light weight, flexibility, a press life of 250,000 impressions or more, 65 to 133 line screens, were some of the features mentioned.

PRINTERS ADVISED ON WRAP-AROUND PRINTING. Paul J. Clark. Printing Production, Vol. 90, No. 1, Oct. 1959, pp. 50-1, 2 pages. A surprise crowd of nearly 500 attended a one-day seminar on wrap-around printing sponsored by the Research and Engineering Council of the Graphic Arts Industry in New York in Sept. 1959. Representatives of various suppliers concerned with etching equipment, plates which have been made for dry offset and are suitable for wrap-around use, DuPont Dycril plates, rollers, ink, and other related items participated in the discussion. Some points brought out were: the wrap-around method should save in ink economy some 20-30% in $, 40-45% in pounds; the photoengraver must learn the techniques of stripping large layouts; plates used successfully so far include zinc, magnesium, Dycril (photopolymer) and copper: the Harris wrap-around press inks a blanket which in turn inks the plate; the Miehle press inks the plate directly from rollers; little or no makeready is needed on either press; competitive costs will vary with the job; it may be possible to convert standard rotary letterpresses to accommodate wrap-around plates; it is better to curve plates first, then print, etch and rout. The final conclusion was that a new method of printing has arrived.

GRAPHIC ARTS RESEARCH SHOWS GAINS AND FAILURES OF SUPPLIERS. Marvin C. Rogers. Printing Production, Vol. 90, No. 1, Oct. 1959, pp. 56-8, 94, 4 pages. Second of a series. The first segment of the supply industry discussed is the paper industry with its Institute of Paper Chemistry and many research conscious mills. The A.N.P.A. Laboratory work on newsprint is mentioned. The ink industry has the National Printing Ink Research Institute at Lehigh University, and a few ink manufacturers and one component manufacturer are mentioned for their work in research. New companies are mentioned as coming into the graphic arts supply area which are highly research conscious in their own fields. Examples are DuPont, Eastman Kodak, Minnesota Mining and Mfg. Co., Dow, R.C.A., Fairchild; and some of their work and results are

discussed. More closely within the industry are Time, Inc., and the press manufacturers.

A PHOTOENGRAVER'S POINT OF VIEW ON THE WRAP-AROUND PLATE. Paul J. Clark. Printing Production, Vol. 90, No. 1, Oct. 1959, p. 63, 1 page. Comments on reports given at an R. & E. Seminar on wrap-around printing*, particularly on equipment required and available for the big plates; and on the fact that the photoengraver is best prepared to handle this business. Stripping will be a new problem for the photoengraver. Author feels that the wrap-around principle is an assured success from the printing standpoint.
*This seminar is reported by the same author in the same magazine on pages 50-1.

NEW MATERIALS AND PROCESSES IN PLATEMAKING. Herms Baumann. Der Polygraph, 19-1959, 5 Oct. 1959, pp. 940-4, 5 pages.(in German). DuPont Dycril; FOGRA nylon; Time-Life nylon; gelatin relief; one bite etching in magnesium, zinc and copper.

'WRAP-AROUND' PRESS CLINICS. Anon. Printing Magazine, Vol. 83, No. 11, Oct. 1959, pp. 62-3, 65, 3 pages. Report on a one-day seminar in New York, Sept. 10, 1959, under the auspices of the Research and Engineering Council of the Graphic Arts Industry. Various manufacturers' representatives made up the panel of experts. Some of the questions asked and answers given are quoted. Some information on platemaking and on Harris, Miehle, and Miller presses is given. 1 illustration.

THE ROLE OF COOPERATIVE RESEARCH IN GRAVURE. Harvey F. George. American Pressman, Vol. 69, No. 10, Oct. 1959, pp. 14, 16-7, 20, 4 pages. Cooperative research is defined, and more such research in the gravure field urged. Some accomplishments of Gravure Research, Inc. are in the field of color reproduction by gravure, in web tension control, and in several lesser fields. Some fields needing attention are more work on color, particularly masking; contact screens for gravure; etching control; proofing; doctor blades; and chrome plating. Some research expenditures quoted on an annual basis are: Gravure Research, Inc., over $60,000; offset, $360,000 plus; A.N.P.A., $370,000; and Time-Life, $1,500,000.

INVENTION WITH GREAT POSSIBILITIES. Anon. Printing Press and Publishing News (London), No. 211, Oct. 22, 1959, p. 4, 1 page. A brief story on a Print Reader, developed by the U. S. Air Force and Farrington Mfg. Co., Alexandria, Va. It reads typewritten pages and translates them into electrical signals at 200 characters per second. It can read only one type face (upper and lower case and punctuation); scans a line at a time; output can be punched paper tape, punched cards, magnetic tape, or signals to feed into a computer.

*FOOD ADDITIVES LAW TAKES COOPERATION OF ALL BOXMAKERS AS ALL ARE LIABLE. Anon. American Boxmaker, Vol. 48, No. 10, Oct. 1959, pp. 22-3, 2 pages. Report on a panel discussion at a TAPPI Plastics - Paper Conference in September in Chicago. Some quotations from Mr. A. A. Checchi of the Food and Drugs Administration: "The FDA offers the assistance of its technical and advisory personnel." "FDA will prepare a list of approved plasticizers and stabilizers that are safe when migrated to food." "Once approval has been given for a specific package for a specific use, the approval would apply to other manufacturers of the same package if the same conditions exist." Discussions by others on the panel are included.

*NEW METHODS, NEW MARKETS, NEW MACHINES. Robert Downie. Advertising Requirements, Vol. 7, No. 10, Oct. 1959, pp. 115, 122, 2 pages. Adapted from a speech delivered before the Lithographers and Printers National Association. Author gives a rather incisive, direct-spoken analysis of the several printing processes as they now stand, together with some speculation on the future. He believes that lithography has advanced to its present position through aggressive action and research and at

present has distinct advantages in certain types of printing. However, he foresees a great future for wrap-around plate letterpress, which adopts many of the advantages of lithography without its disadvantages; also in gravure when certain movements now under way bring cylinder costs down. The relation of inks, inking systems and ink drying to the whole picture are discussed. The incidence of new technical and research groups in various process areas is mentioned. Finally he points out that research has carried lithography "close to its borders of development"; also that most developments of lithographic research help other processes as well. The possibility of a major breakthrough in lithographic techniques is mentioned.

PHOTOENGRAVERS RESEARCH SETUP WIDENS SCOPE. Anon. Printing News, Vol. 63, No. 21, Nov. 21, 1959, pp. 1, 4, 2 pages. Announcement of the acquisition of a laboratory in Park Forest, Ill., which will be used for both research and training. The American Photoengravers Association and the International Photoengravers Union are providing funds. Dr. Marvin C. Rogers is Executive Director and Mr. Paul F. Borth is the Research Director.

'PRINTING PLATES' ON MICROFILM. Ernest F. Trotter. Printing Magazine, Vol. 83, No. 12, Nov. 1959, pp. 54-5, 75-6, 4 pages. A story on the use of microfilm for storage of information, such as engineering drawings, mounting the microfilm in Filmsort punched cards for recovery by mechanical search procedures. When prints are needed, the microfilm is enlarged onto a lithographic printing plate via electrostatic platemaking methods and reproduction of copies is started, all in approximately 8 minutes. The Signal Corps finds this system economical for as few as 12 copies of a drawing. The various equipment components of the system are described. 7 illustrations.

MEET CHALLENGE OF NEW TECHNOLOGY. J. W. Rockefeller. Printing Magazine, Vol. 83, No. 12, Nov. 1959, pp. 72, 74, 2 pages. Third in a series on Wrap-Around plates and related developments. Author speculates on the future of the use of wrap-around plates in letterpress printing, using some of the other processes and their history as background.

PHOTOENGRAVERS STANDARDIZE ON COLOR CONTROL BARS. Anon. Printing Production, Vol. 90, No. 2, Nov. 1959, pp. 41, 87, 2 pages. The standards are those recommended by a joint committee of the American Association of Advertising Agencies, Magazine Publishers Association, and Printing Industry of America. The story of the development of these standards is given, as well as a list of ten features of the new color bar and advantages to the engraver.

GRAPHIC ARTS INDUSTRY SHOWS NO AGREEMENT ON RESEARCH NEEDS. Marvin C. Rogers. Printing Production, Vol. 90, No. 2, Nov. 1959, pp. 50-2, 88, 4 pages. Third of a series. "The heterogeneity of the printing industry is probably the best single explanation of its present research position." Most research is being done by suppliers. Comparatively few printers have engaged in any research, although a few have done so to develop equipment to fit their needs, equipment not available on the market. ". . . research not geared to immediate pay-off is difficult to sell to management." The work of Time, Inc. Springdale laboratory is mentioned. 2 illustrations.

*THE FOOD AND DRUG CRISIS: HOW NOW? Anon. Modern Packaging, Vol. 33, No. 3, Nov. 1959, pp. 134-7, 4 pages. Now fully aware of the implications of the new Food Additives Amendment, the packaging field has begun a program of concerted action as packagers and suppliers take steps to comply with the new law. Progress is slow, but there's hope for the future. Six highlights of this progress are listed. Some clearances by prior sanction are listed.

COMPLIANCE WITH FOOD ADDITIVES LAW HINGES ON COOPERATION. Anon. Paper, Film and Foil Converter, Vol. 33, No. 11, Nov. 1959, pp. 41, 66, 91, 3 pages. Report on a panel discussion on the Food and Drug Administration food additives regulations at the 14th TAPPI Plastics-Paper Conference held in Chicago late in Sept. 1959. Some points brought out were: " converter would be safe in using materials for which his suppliers had obtained approval and which were not altered in converting processes"; "the burden of proof of a material's purity will be placed squarely on the packaging industry"; "in some respects the amendment to the food additives law relaxes restrictions because ' it recognizes that many substances are safe'." Other pertinent points are brought out.

WEB CONTROLS ON REVIEW. PART 3. CONCLUSION. Anon. Paper, Film and Foil Converter. Vol. 33, No. 11, Nov. 1959, pp. 53-5, 70, 4 pages. The first article in the series set forth the theories of web control. This article gives specific data on equipment made by: Champlain Company, Inc.; GPE Controls, Inc.; Intercontinental Dynamics Corporation; and the Stanford Engineering Co. 10 illustrations.

PACKAGING INDUSTRY IN ORBIT. Edgar A. Luscombe. National Lithographer, Vol. 66, No. 11, Nov. 1959, pp. 45-6, 70, 3 pages. Conclusion. Some points discussed in this concluding installment include certain press feed and delivery modifications to handle the heavy sheets used in packaging; growth of the use of offset printing in the folding box field; use of laminated stock with plain or preprinted surfaces; roll fed flexographic or gravure presses, including in some cases, in-line cutters and creasers. Certain new presses recently developed are mentioned. 3 illustrations.